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YES NO X**FACSIMILE COVER SHEET****DATE:** October 25, 2002 **NUMBER OF PAGES TO FOLLOW:** 13**TO:** Examiner A. Flanigan, Art Unit 3743**COMPANY:****FAX NO:** 703-872-9303**FROM:** William R. Gustavson**OUR FILE NO.:** 12643 210**YOUR FILE NO.:** 09/650,335

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Atty/Secr: WRG/bg Check _____ for _____S.N./Pat.No.: 09/650,335Title: "FOOD PREPARATION AND
STORAGE DEVICE"FILED IN THE UNITED
STATES PATENT AND
TRADEMARK OFFICE ONApplicant: JEFFREY A. GIACOMELFiling Date: 08/28/00(Please file and date stamp
hereon.)Atty. File: 12643/210 Mld., 07/29/02 Due: 07/29/02

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12643/210

Serial No.: 09/650,335

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF APPEALS AND PATENT INTERFERENCES

noted

In re U.S. application of: Jeffrey A. Giacomel
U.S. Serial No.: 09/650,335
Filed: August 28, 2000
Group Art Unit: 3743
Examiner: A. Flanigan
For: FOOD PREPARATION AND STORAGE DEVICE

Assistant Commissioner for
Patents
Washington, D.C. 20231

Dear Sir:

BRIEF ON APPEAL UNDER 35 C.F.R. SECTION 1.192

CERTIFICATE OF MAILING (37 CFR 1.8a)	
I hereby certify that this paper (along with any paper referred to as being attached or enclosed) is being deposited with the United States Postal Service on the date shown below with sufficient postage as first class mail and in an envelope addressed to: Assistant Commissioner for Patents, Washington, D.C. 20231.	
Date: <u>July 29, 2002</u>	<u>William H. Gorkovoy</u> (Typed name of person mailing paper)
(Signature of person mailing paper)	

This brief is filed in furtherance of the Notice of Appeal filed in this application on May 28, 2002. Please withdraw the necessary appeal fee of \$320.00 from Deposit Account 50-1274(12643/210) in accordance with 37 C.F.R. Section 1.17(c). Three copies of this brief are enclosed as required under Rule 1.192(a).

If any additional fees are necessary for the proper filing of this appeal brief, including any extension fees under Rule 136, such fees should be withdrawn from Deposit Account 50-1274(12643/210).

I. REAL PARTY IN INTEREST

Jeffrey A. Giacomel is the real party in interest.

II. RELATED APPEALS AND INTERFERENCES

There are no pending related appeals or interferences.

III. STATUS OF THE CLAIMS - RULE 1.192(c)(3)

Claims 1, 2, 4, 6, 7 and 20-23 have been finally rejected. Claims 9 and 11 have been objected to only on the grounds they depend from rejected claims and are otherwise patentable. Claim 3, 5, 8 and 10 were withdrawn as nonelected species. Claims 12-19 were canceled.

IV. STATUS OF AMENDMENTS - RULE 1.192(c)(4)

The Amendment after Final Rejection filed April 25, 2002 was not entered by the Examiner on the grounds it raised new issues.

V. SUMMARY OF THE INVENTION - RULE 1.192(c)(5)

In the commercial food preparation industry, the rapid cooling or heating of food is very critical. For example, when a large batch of food is prepared; for example a stew, beans or the like, health food regulations, and safety, requires the food to be cooled within a certain time period from the cooking temperature, (perhaps 140-165 degrees F.) to the storage temperature of 40 degrees F. The longer the food takes to cool, the longer the food will be in a temperature range conducive to the growth of harmful bacteria and the like which can spoil the food and cause illness.

The commercial food industry will often use manual labor to take large volumes of hot food and place them in plastic bags for protection and submerge the bags and food in ice baths to cool the food from the cooking temperature to the storage temperature. This is a very costly procedure given the energy and labor input that is required each time the procedure is undertaken. In addition, the bags are used to subsequently reheat the food. This process of using

bags involves physically handling food at each bag iteration. It often takes more than a four hour period to cool the food from the cooking temperature to the storage temperature. In addition to the bags and the ice baths, quite often the food is broken down into smaller pans to facilitate cooling. Again, this results in a waste of labor, energy and food and results in an increased possibility of cross-contamination. Many jurisdictions have regulations that limit the time for this cooling procedure and this must be monitored continuously.

In heating the food just before serving, time is also critical. It is desirable to keep this time as short as possible to give the preparer greater flexibility in the timing of the final meal service. Further, the shorter the interval of time to heat the food, the less time the food will be exposed to a temperature range conducive to the growth of bacteria. However, non-uniform heating of the product can cause the loss of product to burning or dehydration at the edges nearest the heat source.

The claimed invention provides a solution to these concerns. As seen in Figures 1A, 1B and 16 of the application, the device 10 is formed of heat conductive material and includes at least two input heat transfer elements in the form of fins 22 that are in parallel spaced planes for insertion within the food or other product. The device 10 includes at least one output heat transfer element (and preferably many) in the form of fin 20 in thermal contact with the input heat transfer elements 22 through the body 18 of the device 10. The output heat transfer elements 20 are exposed to an ambient temperature environment (typically the interior of a stove or refrigerator depending on whether the food is being heated or cooled) to transfer thermal energy between the product and the ambient temperature environment.

If the product is to be cooled, the input heat transfer elements 22 draw heat from the product and transfer the heat to the output heat transfer element 20 for dissipation to the ambient environment. If the product is to be heated, heat is drawn from the ambient environment into the output heat transfer element 20 and transferred to the input heat transfer elements 22 for flow into the product to heat the product uniformly and quickly. In contrast to any art cited by the Examiner, the device 10 reheats along a very predictable path and time line to a specific temperature without scorching or drying the product. The device 10 can reduce the time to reheat by 75 % over known methods. The reheat time with device 10 is $\frac{1}{2}$ to $\frac{1}{4}$ of the time achieved by the most advanced convection/infrared ovens and is superior to microwave heating in avoiding the rupture of the cellular walls of the product which causes microwave food to taste odd.

By using multiple input heat transfer elements which are in parallel spaced planes and positioned closely adjacent each other, the device 10 provides a large surface area in contact with the product, enhancing the heat flow characteristics. The product being heated or cooled flows between the adjacent fins 22 when the device 10 is inserted in the product and therefore no product will be positioned more than $\frac{1}{2}$ the spacing between the fins from a fin surface to provide for rapid heat transfer.

The device can be a single extruded body of aluminum, as shown in Figure 16 and

described at Page 11, lines 9-11 and Page 13, lines 1-3. A heat conductive coating can be applied to the device to facilitate cleaning and meet food handling requirements as noted in the specification at Page 11, lines .

VI. ISSUES - RULE 1.192(c)(6)

Claims 1 and 4 were rejected under 35 U.S.C. 112, second paragraph as indefinite. Claims 1, 2, 6, 7, 20, 22 and 23 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. patent 3,229,757 to Root et al. Claim 21 was rejected under 35 U.S.C. 103 as unpatentable over Root et al.

VII. GROUPING OF CLAIMS - RULE 1.192(c)(7)

Applicant submits that each claim appealed is separately patentable from all other claims and reasons supporting this assertion follow.

Claim 1 is for an apparatus for rapidly changing the temperature of a mass of product including at least two input heat transfer elements, the elements being in parallel spaced planes. The apparatus further includes at least one output heat transfer element in thermal contact with the input heat transfer elements.

Claim 2 is dependent on claim 1 and recites the output heat transfer element defines a plurality of air contact fins. This is separately patentable over claim 1 because of the recitation of a plurality of air contact fins.

Claim 4 is dependent on claim 1 and recites at least one input heat transfer element contacts the bottom of a pan. This is separately patentable over claim 1 because of the restriction of pan contact.

Claim 6 is dependent on claim 1 and recites the heat transfer elements are formed from the group consisting of aluminum, stainless steel, cast iron and copper. This is separately patentable over claim 1 because of the recitation of materials.

Claim 7 is dependent on claim 1 and recites the heat transfer elements are formed as a unitary body. This is separately patentable over claim 1 because of the recitation of a unitary body.

Claim 20 is dependent on claim 1 and recites at least one input heat transfer element being a rectangular fin. This claim is patentable over claim 1 because of the recitation of the

input heat transfer fin being a rectangular fin.

Claim 21 is dependent on claim 1 and recites at least one input heat transfer element being coated with a heat conductive material. This claim is patentable over claim 1 because of the recitation of the heat conductive material coating.

Claim 22 is independent and recites an apparatus with a plurality of product contacting input heat transfer elements, with the elements being fins having first and second major fin surface areas which are generally parallel. The apparatus also includes a plurality of output heat transfer elements in thermal contact with the input heat transfer elements, with these elements also being fins having first and second major fin surface areas which are generally parallel each other and generally parallel to the fin surface areas on the input heat transfer elements. This claim is patentable over the other claims because of the recitation of both elements having first and second major fin surface areas that are generally parallel to each other.

Claim 23 is independent and recites an apparatus with a plurality of product contacting input heat transfer elements for insertion within a mass of product and a plurality of output heat transfer elements, with the input and output elements formed of a single extruded body of aluminum. This claim is patentable over the other claims because of the recitation of the product contacting input heat transfer elements and the formation of the input and output elements as a single extruded body of aluminum.

Each of the independent claims and claims dependent thereon describe different patentable inventions and each provides a significant additional feature thereto which is worthy of separate patent protection.

VIII. ARGUMENT - RULE 1.192(c)(8)

A. The Rejection under 35 U.S.C. Section 112, second paragraph is Respectfully Traversed

The rejection of claims 1 and 4 under 35 U.S.C. Section 112, second paragraph is respectfully traversed. The Examiner states that claim 1 does not clearly recite the "mass of product" as a positively recited element in the claim. The Examiner notes it is recited in the preamble. The Examiner also states the recitation "extending into the mass of product" is deemed a statement of intended use.

It is clear that an applicant can define an environment for the elements of a claim by reciting in the preamble a structure or thing that is not an element of the claim. Claim 1 does not intend to claim the product itself that the apparatus is designed to heat or cool. However, there is

no error in setting forth how the claimed apparatus interacts with the mass of product to achieve the desired result. Applicant believes claim 1 fully meets the requirements of Section 112.

The Examiner asserts claim 4 is indefinite in that it recites the limitation of "said at least one output element contacting the pan". The Examiner asserts that it is unclear from the claim whether the "mass of product" and the "pan" are meant to be positively recited elements of the claim.

Again, the Applicant has the right to define the environment for the elements of the claim. Neither the mass of product nor the pan are elements of claim 4. However, the recitation of the pan as an environmental factor is important to provide precision to the nature of the at least one input heat transfer element by defining the dimensions and nature of the element such that it contacts the bottom of the pan. Applicant therefore believes claim 4 also fully meets the requirements of Section 112.

B. The Rejection under 35 U.S.C. Section 102 is Respectfully Traversed

Anticipation is established only when a single prior art reference discloses each and every element of a claimed invention. RCA Corp. v. Applied Digital Data Sys., Inc., 730 F.2d 1440, 1444, 221 USPQ 385,388 (Fed. Cir. 1984). Here, the Examiner has failed to meet this standard as to claims 1, 2, 6, 7, 20, 22 and 23 for the reasons set out hereinafter.

Claim 1 defines an apparatus for rapidly changing the temperature of a mass of product including at least two input heat transfer elements extending into the mass of product, the elements being in parallel spaced planes. The apparatus further includes at least one output heat transfer element in thermal contact with the input heat transfer elements. This claim requires at least two input heat transfer elements in parallel spaced planes. US patent 3,229,757 to Root et al (hereinafter "Root") discloses a heat dissipator apparatus 10 for cooling a transistor unit 14. The transistor unit 14 only comes into contact with a single elongate bar 19, and clearly the Root patent cannot be a proper Section 102 reference to claim 1 as it does not disclose at least two input heat transfer elements in parallel spaced planes. In fact, if Root were to have a second input heat transfer element in a parallel spaced plane with the bar 19, it would interfere with the mounting of the transistor unit 14 on the Root device.

The Section 102 rejection of claim 2 cannot stand for the same reason set for above. Further, claim 2 requires a plurality of air contact fins. Thus, at least two separate elements are for contacting the mass of product and at least two are not. As noted, Root only has a single bar 19 in contact with transistor unit 14.

The Section 102 rejection of claim 6 cannot stand for the same reason set for above. Further, Root does not suggest the use of stainless steel, cast iron or copper.

The Section 102 rejection of claim 7 cannot stand for the same reason set for above. As claim 7 requires the input and output heat transfer elements to be formed as a unitary body, there can be no question of the impropriety of the section 102 rejection as Root does not have at least two input heat transfer elements in a unitary body.

The Section 102 rejection of claim 20 cannot stand for the same reason set for above. Further, claim 20 requires the input heat transfer element to be a rectangular fin. Root does not disclose a rectangular fin forming an input heat transfer element.

Claim 22 requires a plurality of product contacting input heat transfer elements for insertion within a mass of product with the elements being fins having first and second major fin surface areas that are generally parallel. Again, Root only discloses a single elongate bar 19. Thus Root does not disclose a plurality of product contacting input heat transfer elements being fins with generally parallel first and second major fin surface areas.

The Examiner asserts the recitation of product contacting input heat transfer elements in claim 22 is not distinguishing language, citing *In re Keegan*, 331 F.2d 315, 141 USPQ 512 (CCPA 1964) for the proposition that "product contacting" is simply an intended use. Applicant does not agree that Keegan is pertinent in the present case. Keegan states that the method of using a device is not material to patentability of claims directed to the structure of the device. However, that is not the issue here. The words "product contacting" in claim 22 are limitations to the structure of the input heat transfer elements, and are thus proper.

Of more relevance is the case of *In re Venezia*, 189 USPQ 149 (CCPA 1976) which found the phrase "adapted to be fitted" imparted structural limitations to a claimed sleeve in relation to the structure to which the sleeve would be fit. This case holds the structure of a component can be defined in terms of the attributes that it possesses. Here, the attribute claimed for the input heat transfer elements is that they are product contacting. In use for heating and cooling food, this has a clear meaning in requiring the elements to be suitable for use with food under the relevant health and safety codes.

Claim 23 recites a plurality of product contacting input heat transfer elements. The rejection of this claims under Section 102 is improper for the same reasons set forth above with regard to claims 1 and 22. Further, claim 23 requires a plurality of both the product contacting input heat transfer elements and a plurality of output heat transfer elements, all formed of a single extruded body of aluminum, while Root has only a single bar 19 in contact with the transistor unit 14.

C. The Rejection under 35 U.S.C. Section 103 is Respectfully Traversed

The rejection of claim 21 under Section 103 over Root is respectfully traversed. Claim 21

requires the apparatus of claim 1 to have said at least one input heat transfer element coated with a heat conductive material. As clearly set out in the application, the apparatus can be used for heating and cooling food and must have exposed surfaces suitable for food contact under the relevant health and safety codes. One way to achieve this is to coat the surfaces with a food grade coating.


The Examiner asserts it would be obvious to coat the surfaces of Root. However, it is well established that the mere fact that the prior art could be modified would not have made the modification obvious unless the prior art suggested the desirability of the modification. In re Mills, 916 F.2d 680, 682, 16 USPQ 1430, 1432 (Fed. Cir. 1990). Here, there is no incentive in Root to coat any surfaces of apparatus 10. Root achieves its desired function of cooling transistor assembly 14 best by providing no coating to the heat dissipator apparatus 10. Therefore, the obviousness rejection over Root cannot be sustained.

CONCLUSION

For the reasons set forth above, allowance of claims 1, 2, 6, 7 and 20-23 is respectfully requested.

Attached is an Appendix containing a copy of the appealed claims.

Respectfully Submitted,
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APPENDIX - RULE 1.192(c)(9)

Claim 1. An apparatus for rapidly changing the temperature of a mass of product, comprising:
a: least two input heat transfer elements extending into the mass of product, the input heat transfer elements being in parallel spaced planes;
a: least one output heat transfer element in thermal contact with the input heat transfer elements and exposed to an ambient temperature environment to transfer thermal energy between the product mass and the ambient temperature environment.

Claim 2. The apparatus of Claim 1 wherein said at least one output heat transfer element defines a plurality of air contact fins.

Claim 4. The apparatus of Claim 1 wherein the mass of product is in a pan, the pan having a bottom, said at least one input heat transfer element contacting the bottom of the pan.

Claim 6. The apparatus of Claim 1 wherein the at least one input heat transfer element and at least one output heat transfer element are formed of a material selected from the group consisting of aluminum, stainless steel, cast iron and copper.

Claim 7. The apparatus of Claim 1 wherein the at least one input heat transfer element and at least one output heat transfer element are formed as a unitary body.

Claim 20. The apparatus of claim 1 wherein said at least one input heat transfer element is a rectangular fin.

Claim 21. The apparatus of claim 1 wherein said at least one input heat transfer element is coated with a heat conductive material.

Claim 22. An apparatus for rapidly changing the temperature of a mass of product, comprising:
a plurality of product contacting input heat transfer elements for insertion within the mass of product, the input heat transfer elements being fins having first and second major fin surface areas, the fin surface areas of said input heat transfer elements being generally parallel;
a plurality of output heat transfer elements in thermal contact with the plurality of input heat transfer elements and an ambient temperature environment to transfer thermal energy

between the product mass and ambient temperature environment, the output heat transfer elements being fins having first and second major fin surface areas, the fin surface areas of said output heat transfer elements being generally parallel each other and generally parallel to the fin surface areas of the input heat transfer elements.

Claim 23. An apparatus for rapidly changing the temperature of a mass of product, comprising:

a plurality of product contacting input heat transfer elements for insertion within the mass of product;

a plurality of output heat transfer elements in thermal contact with the plurality of input heat transfer elements and to an ambient temperature environment to transfer thermal energy between the product mass and ambient temperature environment, the input and output heat transfer elements formed of a single extruded body of aluminum.